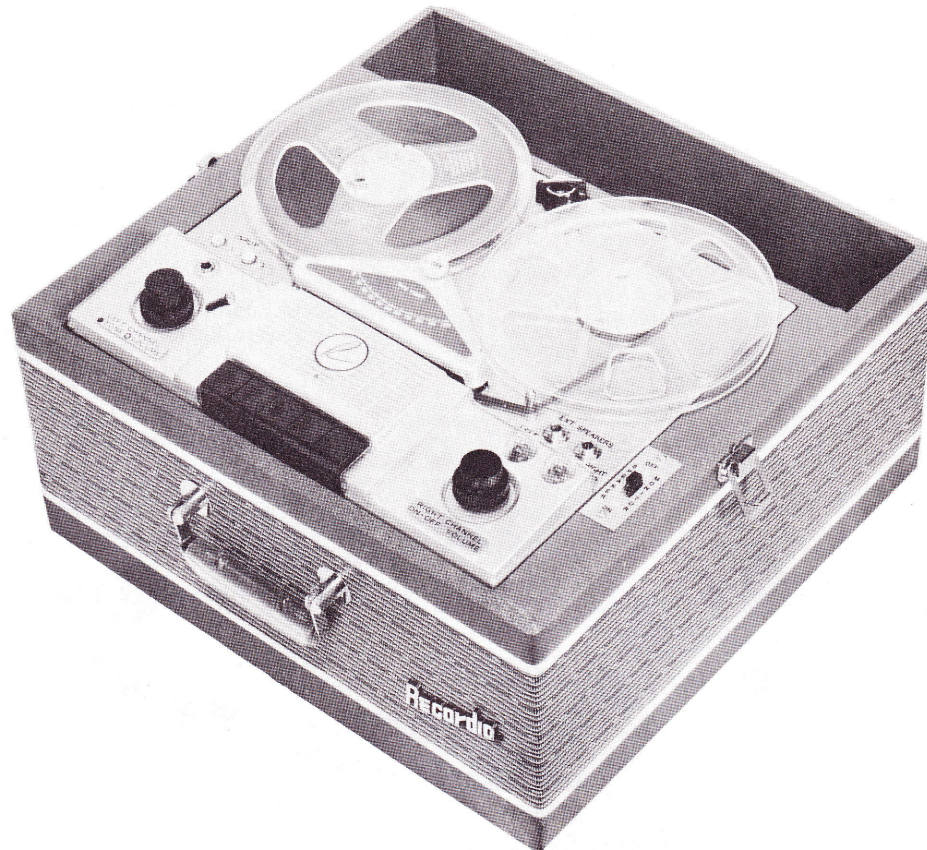
RECORDIO
MODEL R-592RECORDIO
MODEL R-592

GENERAL INFORMATION

Model 592 Recordio tape recorders feature dual-track, dual-speed, monaural recording and stereophonic playback. Double-track recording gives two full-length recordings on a reel of tape. Any size reel up to seven inches can be used. A tape timer enables the operator to locate immediately any selection on a recorded tape. Two neon record-level indicators simplify the recording-level setting.

New recordings can be made on a previously recorded tape because the erase head is automatically positioned when the Record button is depressed, or the same recording may be played back indefinitely. Recordings can be made from an external radio, television receiver, phonograph, or telephone, in addition to those made directly from the microphone. Recordings can be played back through the self-contained speaker or an external speaker or speakers by using the output jacks.

Model 592 has two tape speeds, 7 1/2 and 3 3/4 inches per second. When both tracks of the tape are used, the recording times are as follows:

Reel Size	3 3/4 Ips	7 1/2 Ips
5" (600 ft.)	1 Hour	1/2 Hour
7" (1200 ft.)	2 Hours	1 Hour

The Recordio operates on 60 cycles, 117 volts AC only. Before connecting to a line supply, be absolutely certain it agrees with the foregoing specifications. The unit will be severely damaged if connected to a direct current (DC) line.

Manufactured by:

Recordio Corporation
Charlotte, Michigan**HOWARD W. SAMS & CO., INC.** Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of CQ416



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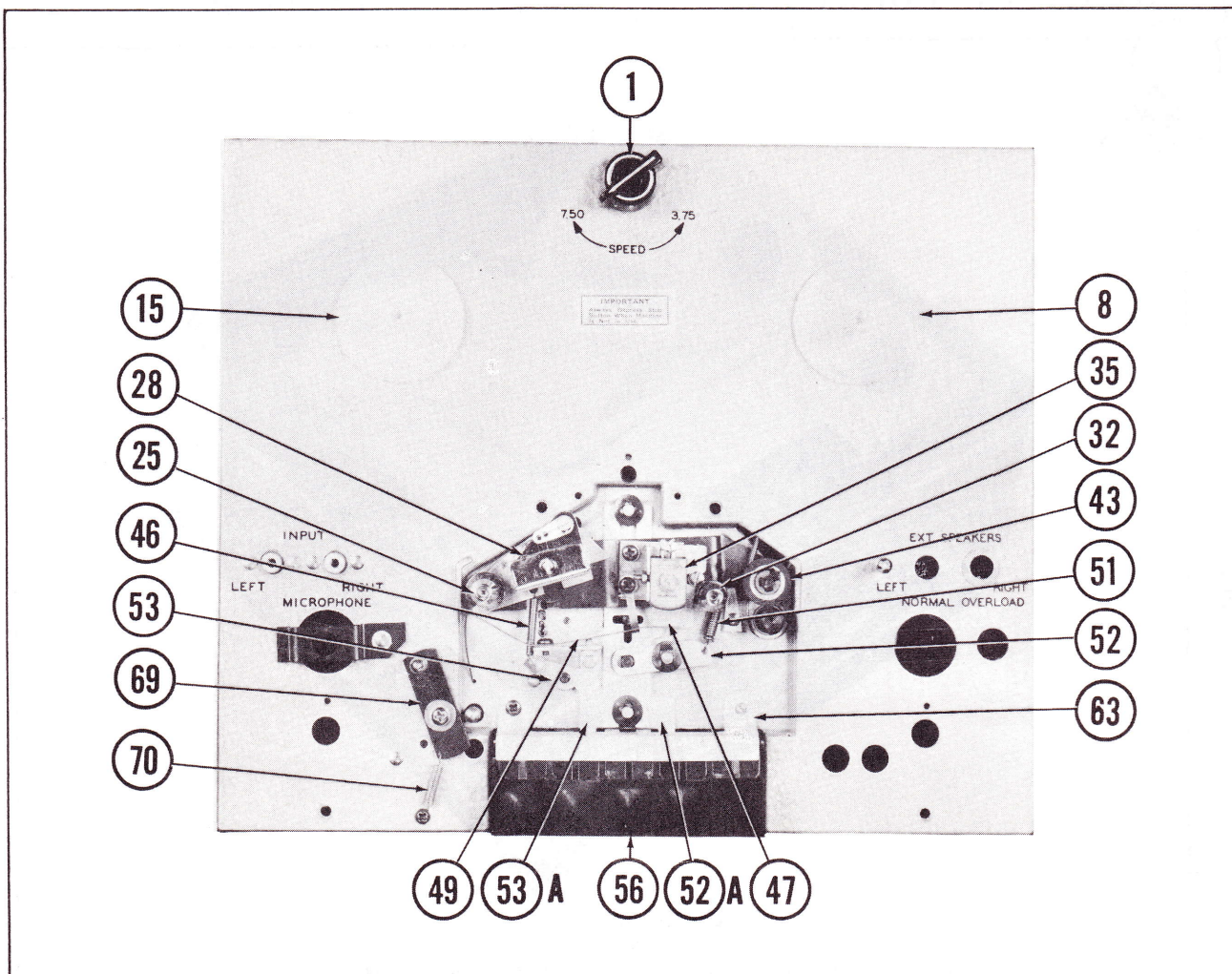


FIG.1 TOP VIEW OF MECHANISM WITH ESCUTCHEON REMOVED

OPERATING INSTRUCTIONS

Preparing For Operation

1. Remove the AC cord, reel of tape, empty reel, and the microphone from the case storage compartment.
2. Depress the Stop button.
3. Insert the AC cord into a convenient wall receptacle of the proper rating and into the AC input on the cabinet.
4. Set the Speed Change knob to 3.75 or 7.50, as desired.

CAUTION: Do not turn Speed Change knob unless Stop button is depressed.

When the Forward or Rewind buttons are depressed, the Record and Play buttons are locked so that they cannot be pressed down, with the possibility of spilling the tape. The buttons should always be pressed down firmly until they latch. Always depress the Stop button before changing functions or speeds.

IMPORTANT: Always depress the Stop button when the recorder is not in use.

Threading The Tape

1. Place a reel of tape on reel pan (15), making certain the reel slots engage the protrusions on the pan. Place an empty reel on reel pan (8), again making certain the reel slots engage the protrusions on the pan.
2. Unwind about 14 inches of tape from the supply reel. Holding a section of tape straight with both hands, insert it into the tape slot, making certain the dull-coated side faces the heads (rear of the unit).
3. Insert the free end of the tape into one of the three slots in the hub of the take-up reel. While holding the end in place, turn the reel two or three times until the tape is secured to the reel.

To Record From a Microphone

1. Turn the Right Channel On-Off-Volume control to the right, and allow about 30 seconds for the unit to warm up.
2. Move the Record Lock lever downward with the left hand. This releases the Record Safety lock,

which prevents accidental erasure.

3. Depress the Record button with the right hand (while holding the Record Lock lever with the left hand) until it latches.
4. Adjust the large, outside knob (located on the left) until the normal level indicator just flashes while you are speaking into the microphone. The Overload indicator may flash occasionally on peak passages. It should not flash continually, which indicates distortion.
5. The Tone control is automatically disconnected when the unit is recording. When recording from a radio, set the radio tone control for maximum treble.

NOTE: To Monitor the recording, place the Monitor switch in the On position. Always turn the right-channel Volume control to minimum before recording.

To Record From an External Radio, TV Receiver, or Phonograph

1. Insert adaptor plug A-601 into the Microphone jack.
2. Insert the phonograph plug into the adaptor plug.
3. For radio or TV recording, connect the patch cord (Part No. C20, 233) to the voice-coil terminals of the radio or TV receiver speaker by means of the alligator clips. Plug into the Microphone jack.
4. Proceed with recording as described under "To Record From Microphone".

NOTE: Remove patch cord and accessory plug after recording.

To Use Second Track

1. Depress the Stop button after all tape has been wound onto the take-up reel.
2. Remove reel containing tape, and place on left (supply) reel.
3. Place empty reel on right (take-up) pan.
4. Thread the tape, and proceed with the recording as previously described.

To Erase Tape

When the Record button is depressed, the erase head is automatically positioned, erasing any previous recording while a new one is being made. Material no longer needed can be erased, without recording, by depressing the Record button and turning the left Volume control knob to its minimum position. One track is erased at a time. To erase the second track, reverse the reels and repeat the foregoing operation.

To Play Recordings

1. Thread tape as described under "Threading the Tape".

2. Set the Speed Change knob to the speed at which the recording was made.
3. Depress the Play button until it latches.
4. Adjust the volume and tone to the desired listening level.

NOTE: The speaker Monitor switch must be in the On position.

High-Speed Forward or Rewind

To play a certain portion of the tape over again, it is not necessary to rewind the entire reel. Depressing the Forward or Rewind buttons will rapidly advance or reverse the tape.

Several minutes of normal recording can be skipped in a few seconds by using the Forward and Rewind buttons.

Tape Timer

If you wish to play back a certain recording while making a recording or playing back a tape, note the reading on the Timer scale at the time the particular reading is being made or heard. Rewind the tape until the same number appears on the scale. Depress the Stop button, and then the Play button.

When starting a new reel or rerecording a reel, reset the indicator pointer to "0" by rotating the Reset knob. By starting at "0" on all tapes, you can catalog the number location for each selection on any reel.

To Use Extension Speaker or Speakers

For better tone quality and power than the internal speakers can provide, it is suggested that large external speakers be plugged into the External Speaker jacks.

The Recordio Model DS-599 dual-extension speaker set enables you to use two speakers, giving more power and sound. Each speaker has a speaker jack, so that one speaker can be plugged into the other. Thus, both speakers are in operation for better monaural sound on straight playback or when the recorder is used for public-address systems. However, the recorder is suitable for use with any extension speakers of the permanent-magnet type, provided they are matched and have a 3- to 8-ohm voice coil.

For stereophonic playback, plug each extension speaker into its corresponding jack; plug the left extension speaker into the external speaker jack marked Left, and the right extension speaker into the extension jack marked Right. Place the two extension speakers (or the recorder and one extension speaker) about ten feet apart. Turn the speakers until they are at a 45-degree angle to each of the side walls, with the fronts of the speakers toward the walls and not the center of the room.

To Play Stereophonic Tapes

1. Thread tape in normal way.
2. Turn right knob to the On position.
3. Depress the Play button; and turn the large,

RECORDIO
MODEL R-592

FOLDER 10

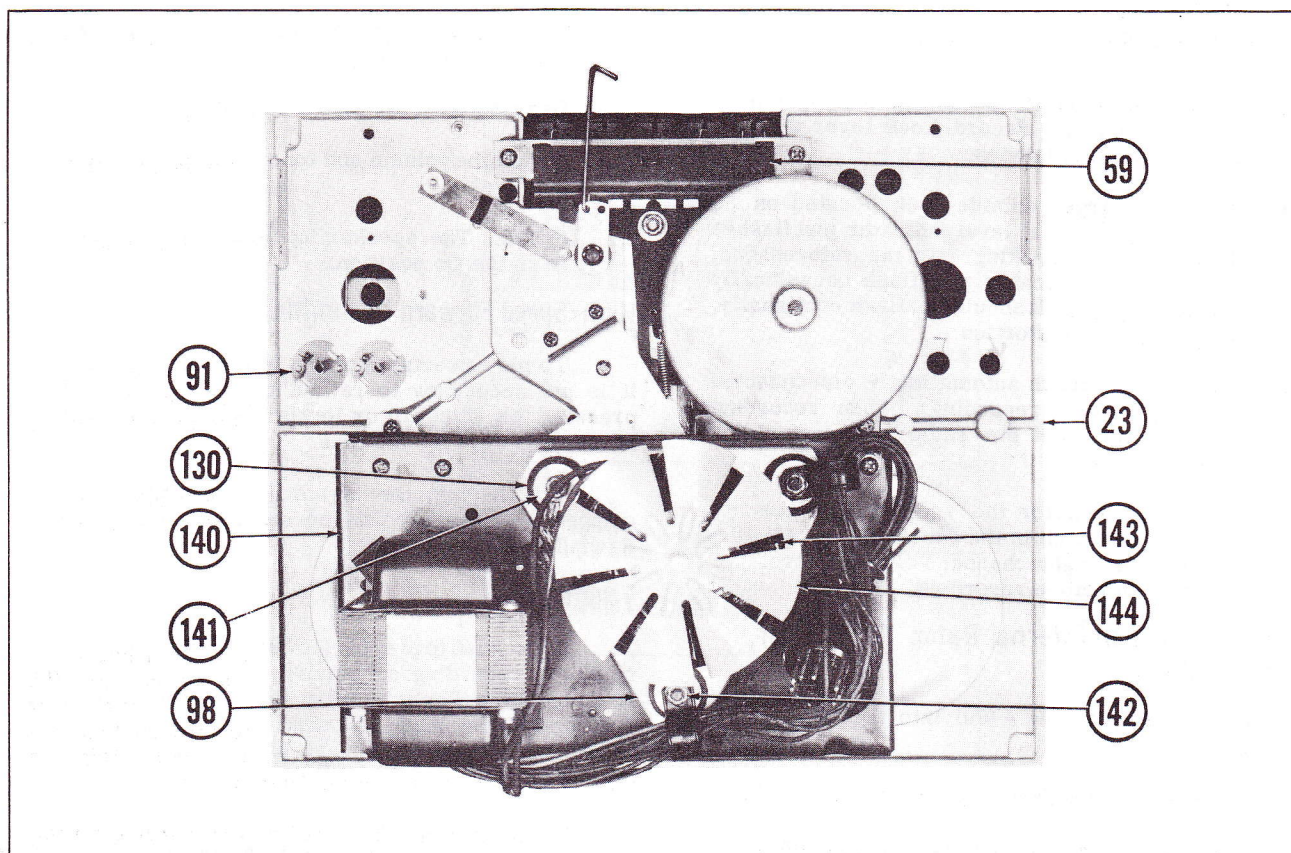


FIG. 2 BOTTOM VIEW OF MECHANISM

outside, left knob to the desired audio level—this is the left channel of the tape only.

4. Turn the right knob (right channel) to the point where the volume is the same as that of the left channel.
5. Adjust the Tone (small inside knob, left side) for the most desirable listening of the highs and lows.

To Play Stereophonic Records

When a stereophonic playback turntable is used,

stereo records can be played directly through the recorder, without additional preamps, amplifiers, or speakers.

1. Insert the two turntable output cables into the left and right input jacks.
2. With the recorder in the Stop position, turn the right knob to the On position, and proceed as in "To Play Stereophonic Tapes". The speaker Monitor switch (on the right side) must be in the On position.

DISASSEMBLY INSTRUCTIONS

To Remove Unit From Case

1. Remove Volume and Tone control knobs.
2. Remove two Phillips head screws from front escutcheon.
3. Remove two hexhead screws from front of base plate.
4. Remove two Phillips head screws from the rear compartment.
5. Remove Phillips head screw holding AC cord to cabinet.

6. Lift unit out of case, removing speaker leads from speakers before removing unit completely.

7. To reassemble, reverse the foregoing procedure.

To Remove Amplifier From Transport Mechanism

1. Remove the motor and power-transformer plug from the amplifier chassis.
2. Remove the four head leads from the play-record head terminal lugs.
3. Remove two slotted-head machine screws from each end of the amplifier chassis.

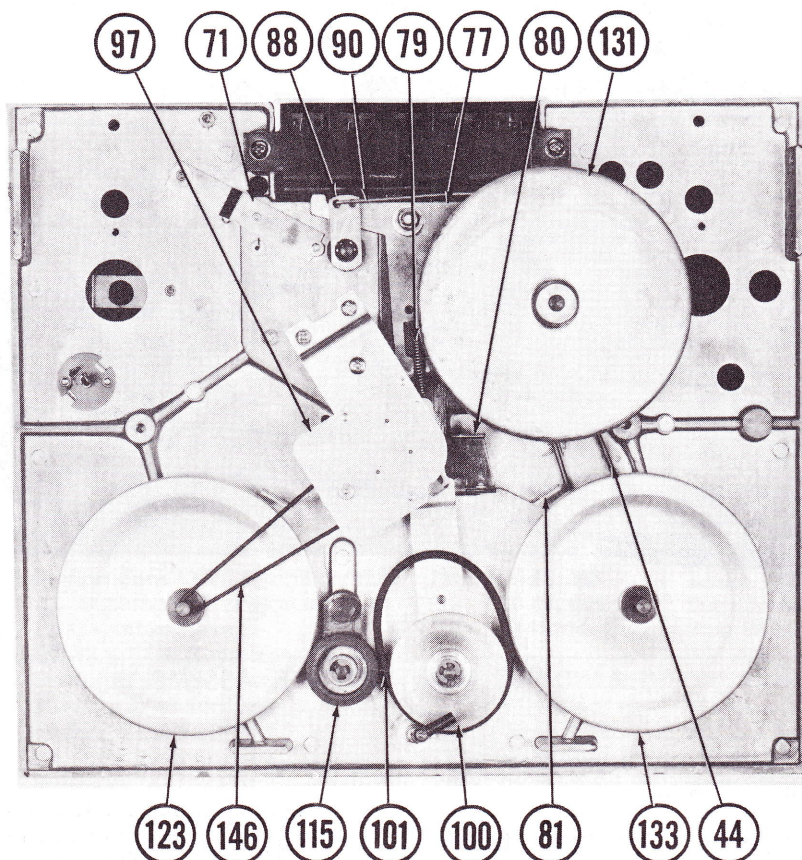


FIG. 3 BOTTOM VIEW OF MECHANISM WITH DRIVE MOUNTING PLATE REMOVED

4. Carefully lift the amplifier away from the transport mechanism, and disconnect the play-record switch actuating link.
5. To reassemble, reverse the foregoing procedure.

ADJUSTMENTS

Pressure-Pad Adjustment (Refer to Exploded View)

1. Remove front escutcheon (14).
2. Depress the Play button. Do not turn the recorder on.
3. Using a pencil-type postal scale, check the pressure needed to just pull the right pad away from the play-record head. The test should be made at the end of the pressure-pad mounting spring. If necessary, adjust locked adjustment screw (50) until a reading of $1 \frac{3}{4}$ ounce $\pm \frac{1}{4}$ ounce is obtained.
4. Adjust guide post pressure pad (left pad) by bending pressure pad spring (49). It must be adjusted for minimum pressure against the tape.

NOTE: After making the adjustments, depress the Stop button, and replace the front escutcheon.

Erase Head Adjustment

1. With tape properly threaded, turn recorder on, and depress the Record button. Allow tape to run for a few seconds; then turn recorder off, but leave Record button depressed.
2. With timer escutcheon (7) and front escutcheon (14) removed, check erase head (28) to see that it is parallel with the tape.
3. Make sure the top edge of the tape coincides with the top end of the diagonal slot in the erase head (junction of long diagonal and short vertical slot). (See Fig. 1.) To adjust the level of the tape, loosen set screw (24), and rotate tape guide post (25) to move the tape up or down. (See Exploded View.)

Brake Shoe Adjustment

1. With all push buttons in the up position, brake

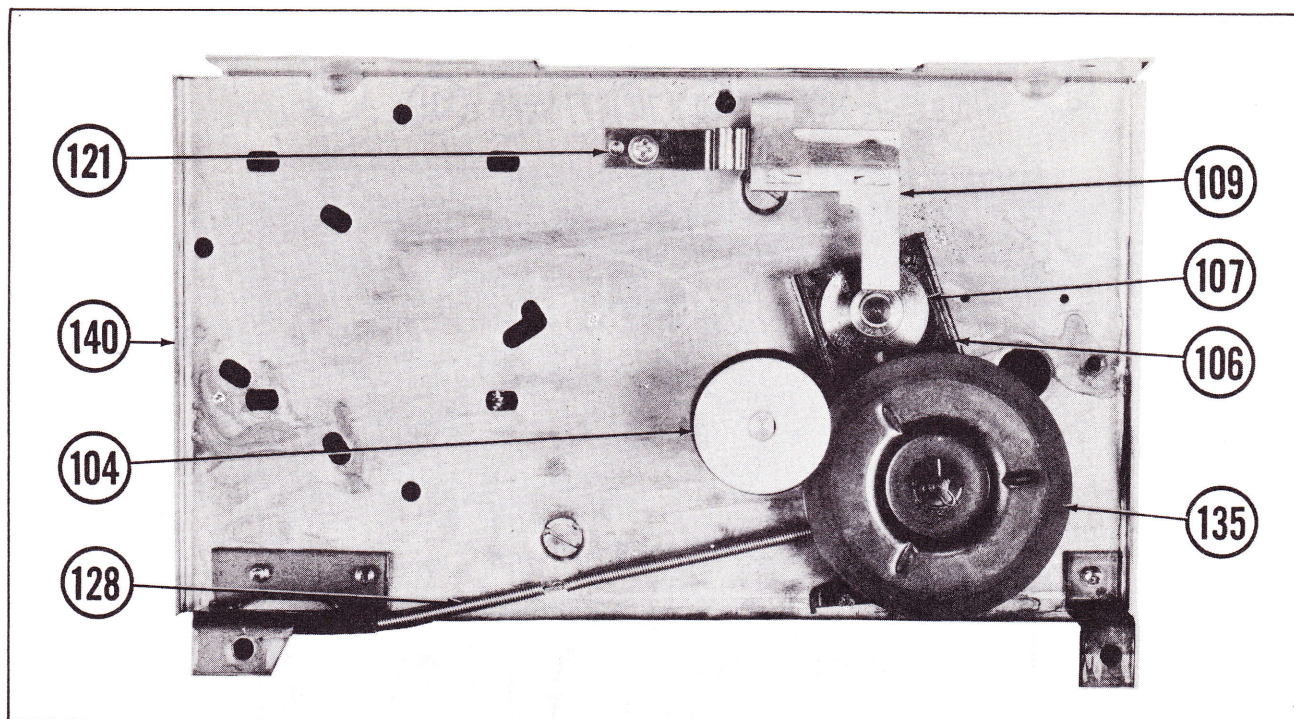


FIG. 4 DRIVE MOUNTING PLATE ASSEMBLY

pads (81) should clear brake drums (123) and (133) by approximately 1/8 inch.

2. Depress the Stop button while observing the brake pads. Both brake pads must contact the brake drums at the same time and with equal pressure.
3. If necessary, adjust the pressure by bending brake spring (80).

Head Alignment

Use standard 6- or 12- alignment tape for this procedure.

Remove front and rear escutcheons. Clean pole pieces of play-record head, using a good commercial head-cleaning agent, naphtha, or lighter fluid. Proceed

as follows:

1. Thread alignment tape on recorder, and turn right-channel volume on full. Connect VTVM to Right Channel External Speaker jack. Set meter for AC volts, 3-volt range.
2. Place unit in Play position, 7 1/2 ips. Decrease volume until output is 1 volt on meter. Rotate play-record head adjustment screw (33) until maximum point of deflection is found.
3. Gently press the pressure pad at a point to the extreme right of the play-record head. The output should not increase. If it does, slightly readjust the pressure pads. (See "Pressure Pad Adjustment").

CLEANING

Most defects, other than wear or breakage, can be traced to dirty surfaces. Stereo head (35), the capstan, and pinch roller (43) may accumulate tape-coating oxide, which is worn off the tape as it passes these parts. This accumulation should be periodically

removed because it will cause faint recording and poor playback. Wipe these surfaces carefully with a clean cloth. If dirt is caked or hard and will not come off with a dry cloth, dampen the cloth slightly with alcohol.

LUBRICATION

All rotating parts have generous sized Oilite bearings, which are factory lubricated. Under normal use, no further lubrication is necessary. In heavy-duty service, the following parts should be lubricated once a year with a drop of No. 20 motor oil.

1. The top and bottom motor bearings.
2. The capstan bearing.
3. Pinch roller (43) bearing.

4. All idler and drive-wheel bearings.

5. The reel-spindle bearings.

The basic rule is — do not overlubricate. Oil must be kept off all rubber idlers and belts, the fly-wheel rim, and off any parts that might transfer oil

to them. Always wipe excess lubricant from lubricated parts.

Occasionally remove foreign matter from under the plastic push-button cover, and place a drop of oil on the sliding lever members.

TROUBLE CHART

Symptom	Cause	Remedy
Motor and amplifier dead.	1. Power-supply defect.	1. Check voltages per schematic.
	2. Damaged power cord.	2. Repair or replace power cord.
	3. Defective On-Off Switch.	3. Replace On-Off switch.
Does not record.	1. Faulty microphone or cord.	1. Replace if necessary, after checking recorder with another type of input.
	2. Faulty input jack.	2. Check input jack, and replace if necessary.
	3. Faulty tube.	3. Check tubes.
	4. Open play-record head (35).	4. Check continuity. After checking, demagnetize head.
No erase, or erase is incomplete.	1. Erase head tension spring (46) disconnected or broken.	1. Connect or replace spring (46).
	2. Erase head (28) not adjusted properly.	2. See "Erase Head Adjustment" under "Adjustment".
Flutter.	1. Dirty stereo head (35), pressure pads, capstan shaft, or pinch roller (43).	1. Clean as described under "Cleaning".
Wow.	1. Brake return spring (74) disconnected or broken.	1. Connect or replace spring (74).
	2. Oil or foreign matter on drive surfaces.	2. Clean with a cloth and alcohol.
Tape spills when Stop button is depressed during fast forward or rewind.	1. Brake shoe out of adjustment.	1. See "Brake Shoe Adjustment" under "Adjustment".
	2. Brake pads worn out or missing.	2. Replace brake pads.
No fast forward or rewind.	1. Idler lever tension spring (79) disconnected or broken, thereby not actuating idler (85).	1. Connect or replace spring (79).
	2. Idler drive belt (101) broken or not properly connected.	2. Replace idler drive belt (101).
Tape fails to wind onto take-up reel during Play or Record.	1. Reel drive spring (44) loose, disconnected, or broken.	1. Connect or replace reel drive spring (44).
	2. Reel pan shaft (8) binding.	2. Remove foreign matter from bearing surfaces and shaft with clean cloth. Lubricate with one drop of No. 10 motor oil.
No drive in Play or Record.	1. Idler tension spring (128) disconnected or broken.	1. Connect or replace spring (128).

RECORDIO
MODEL R-592

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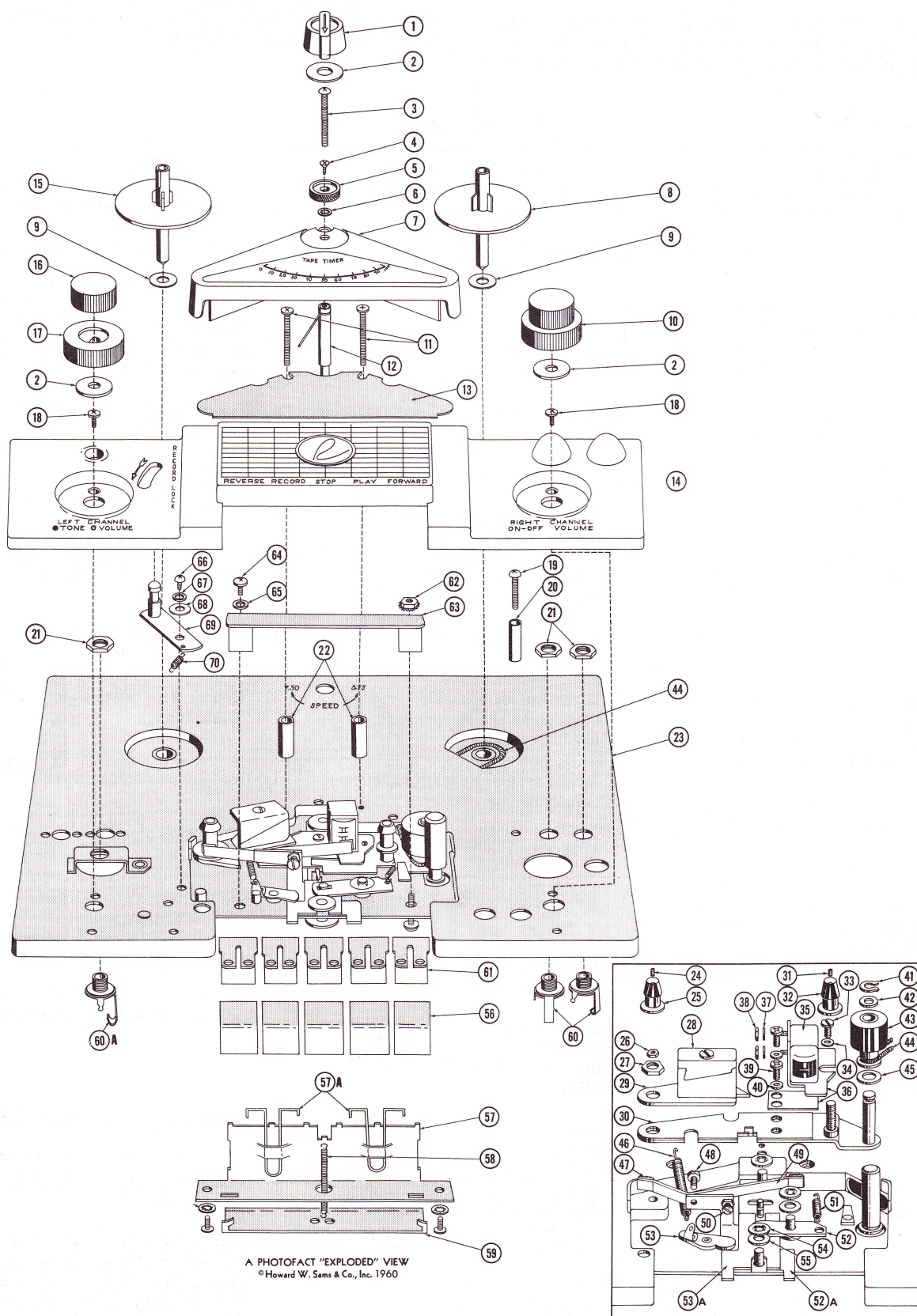


FIG.5A EXPLODED VIEW OF PARTS ABOVE BASEPLATE

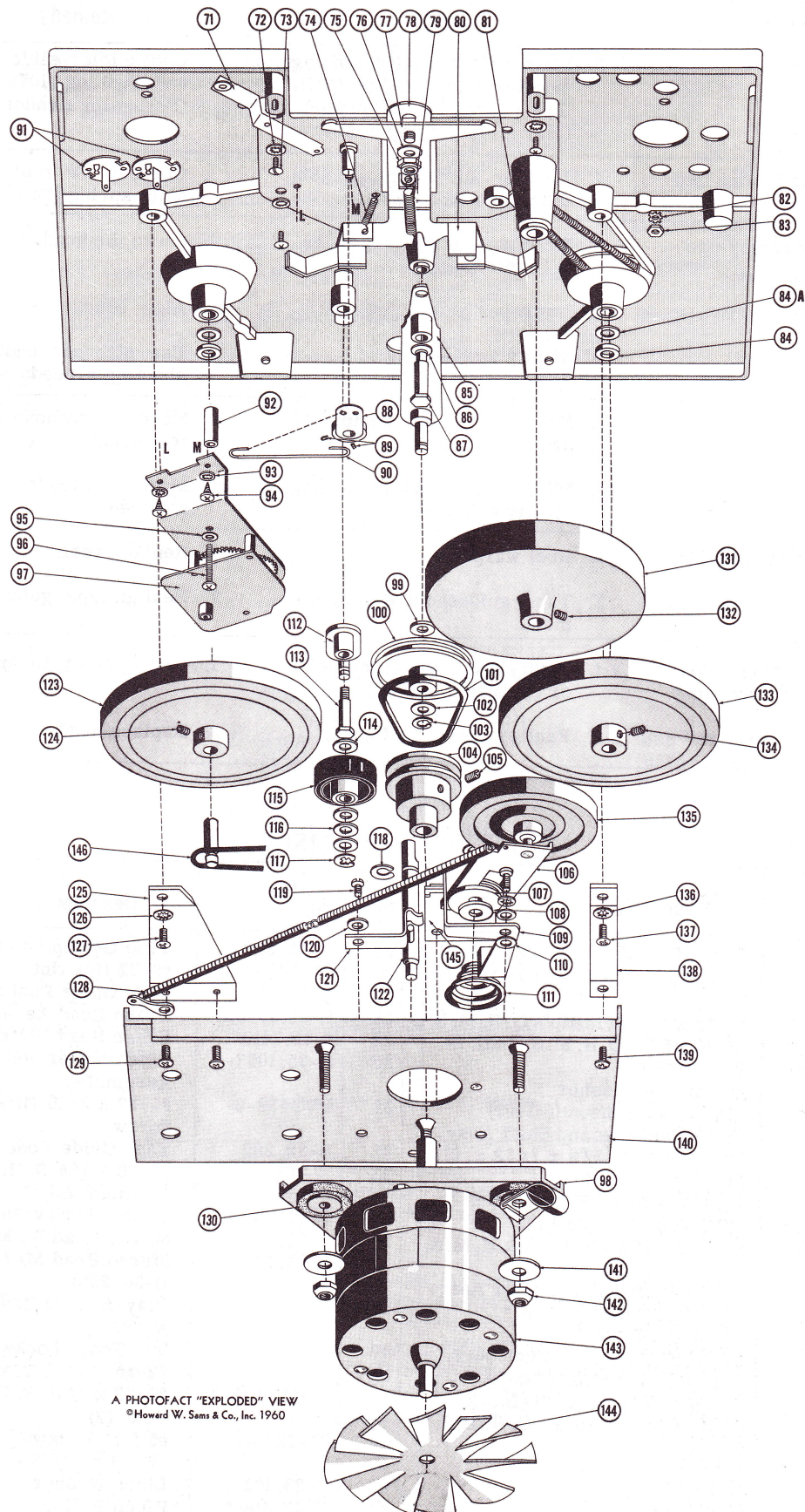


FIG.5B EXPLODED VIEW OF PARTS BELOW BASEPLATE

TROUBLE CHART (CON'T.)

Symptom	Cause	Remedy
	2. Idler slide plate (106) binding on idler slide bushing (107), thus preventing idler wheel (135) from moving forward.	2. Check idler slide plate (106) and bushing (107) for burrs. Clean with alcohol.
Push buttons fail to latch into position.	1. Locking plate spring (58) disconnected or broken.	1. Connect or replace locking plate spring (58).
Poor high - frequency response.	1. Head not making proper contact with tape. 2. Improper head alignment. 3. Faulty amplifier.	1. Clean the head. 2. Align head. 3. Use standard audio troubleshooting procedures.
Hum	1. Microphone near equipment producing hum. 2. Microphone leads insufficiently shielded.	1. Move microphone away from equipment. 2. Make sure leads are properly shielded.
Tapes scrapes against edge of reel.	1. Reel warped. 2. Tape guides out of adjustment.	1. Replace reel. 2. Realign tape guides.
Distorted recording; low volume due to no recording bias.	1. Faulty bias oscillator tube V1 or oscillator coil L1. 2. Faulty play-record head.	1. Check V1 or L1 and replace. 2. Replace head.

MECHANICAL PARTS LIST

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
1	C-13. 253-7	Speed Shift Knob (Black)	25	B-32. 300	Tape Guidepost (Left)
2	73-2254-3	Felt Washer 3/4 x 1/4 I. D. x 1/16	26	48-410-1	#6-32 Hex Nut
3	57-4C-624-5	#6-32 x 1 1/2 Phillip's O. H. M. S.	27	B-32. 260	Tape Guide Post Spacer
4	57-4C-405-5	#4-40 x 5/16 O. H. M. S. Phil. St.	28	B-35. 1048-1	Erase Head Assembly
5	B-32. 302-2	Timer Knob	29	B-19. 1410-1	Erase Head Plate
6	73-2334-1	#6 Cantlink Washer	30	C-35. 1067-3	Pinch Roller and Record Head Assembly
7	B-13. 292-2	Timer Escutcheon (Silver)	31	57-3439-0	#6-32 x 3/16 Bristol Hd. Set Screw
8	C-13. 318-0	Nylon Reel Pan and Shaft Assy.	32	B-32. 282	Tape Guide Post (Right)
9	B-28. 163	Linen Washer 3/8 x 7/32 x .010 Black Varnished	33	57-3102-1	#4-36 x 1/4 R. H. M. S. (Azimuth Adj.)
10	C-13. 422-1	Volume-On-Off Knob (Black)	34	73-2231-1	#4 Int. Lockwasher Std. C. P.
11	57-1C-618-1	.250 Shaft W/.156 Flat	35	B-36. 250	Stereo Head W/M
		#6-32 x 1 1/8 Phillip's B. H. M. S.		B-36. 248	Stereo Head M/M (Alt. for B-36. 250)
12	B-35. 851-1	Timer Shaft and Indicator Assy.	36		Play-Record Head Bracket Assy.
13	B-19. 975-2	Rear Escutcheon Plate	37		Int. Tooth Lockwasher
14	B-13. 295-8	Front Escutcheon	38		#2-56 x 3/16 Hex Nut
15	C-13. 318-0	Nylon Reel Pan and Shaft Assy.	39	57-1C-603-2	#6-32 x 3/16 B. H. M. S. Stat. Brz. (2)
16	C-13. 417-1	Tone Control Knob (Black)	40	73-2231-4	#6 Int. Lockwasher (2)
17	C-13. 416-1	Volume Control Knob (Black)	41		"E" Ring 3/16 Shaft
18	57-4C-610-5	#6-32 x 5/8 Phillip's O. H. M. S.	42	B-28. 163	Linen Washer
19		Screw	43 *	B-33. 404 *	*Pinch Roller
20	B-19. 1561	Spacer	44	B-31. 351	Reel Drive Spring Belt
21		Hex Nut	45	B-28. 163	Linen Washer
22	B-33. 446	Spacer (2)	46	B-31. 361	Erase Head Tension Spring
23	E-13. 423-1	Base Plate, Gray Hammertex			
24	57-3439-0	#6-32 x 3/16 Bristol Head Set Screw			

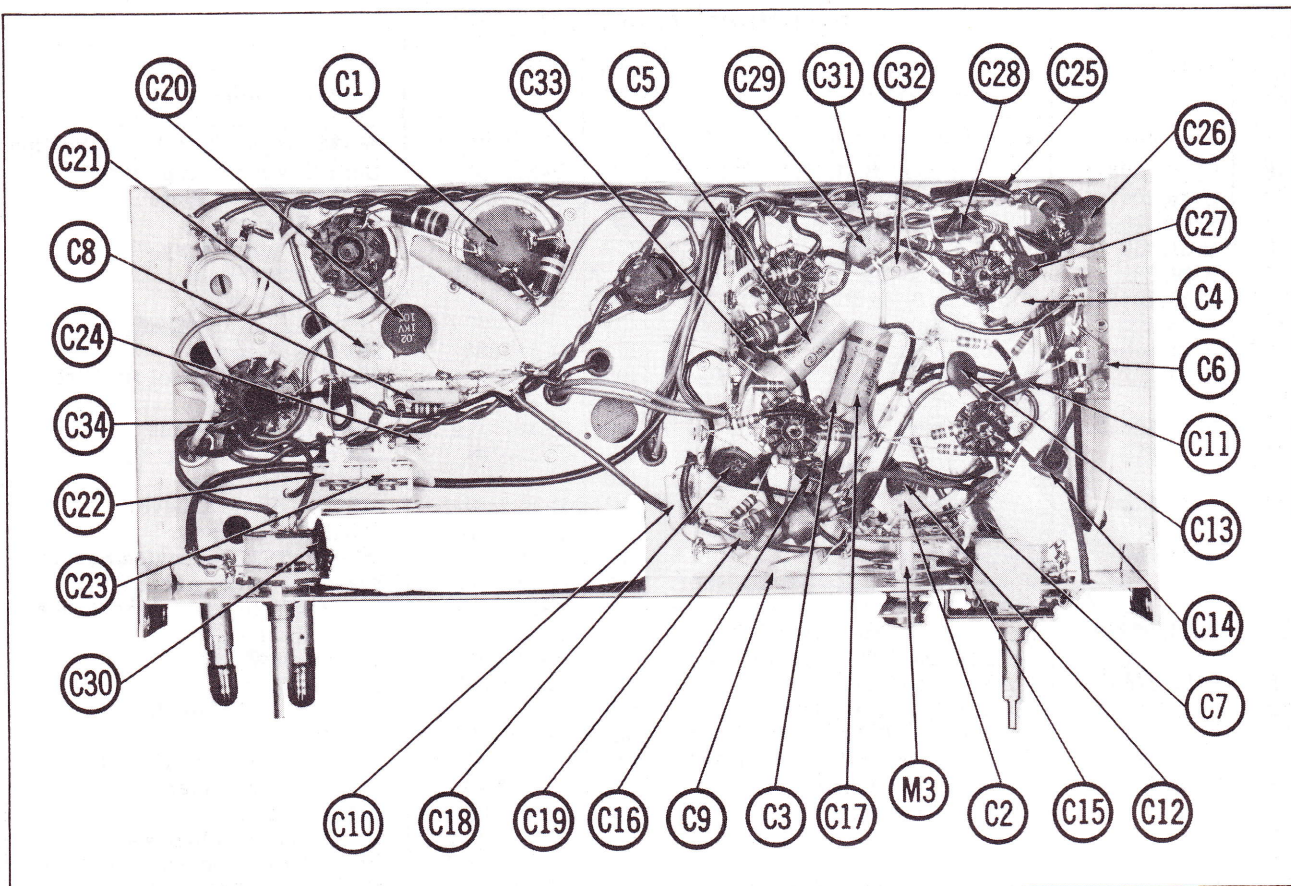
MECHANICAL PARTS LIST (CON'T.)

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
47	B-31.334	Felt Pads (2 used)	96	57-1C-614-1	#6-32 x 7/8" B. H. M. S. Phillips
48	57-1C-603-2	#6-32 x 3/16 B. H. M. S. Sta.Brz.	97	D-33.445	Gear Train for Tape Index
49	B-35.1047-1	Pressure Pad Assembly	98	C-19.837	Motor Adaptor Plate
50	57-16C-606-1	#6-32 x 3/8 R. H. M. S.	99	B-28.163	Linen Washer
51	B-31.360	Pinch Roller Spring	100	B-35.1066	Sheave Pulley Assy.
52	B-19.881	Playback Actuating Lever	101 *	B-28.181 *	* Idler Drive Belt
52A	B-35.1045-1	Playback Slide Plate Assy.	102	B-28.163	Linen Washer
53	B-35.882-1	Record Actuating Lever Assy.	103		"E" Ring, 3/16" Shaft
53A	B-19.868	Record Slide Plate	104	B-32.288	Motor Pulley
54	B-33.412	Push-on Stud Nut for 3/16 Stud	105	57-3589-1	#8-32 x 1/4" Bristol Hd. Set
55		Flat Washer			Screw
56	B-13.258-8	Push Button (Black)	106	B-35.1064-1	Idler Slide Plate Assy.
57	B-19.859	Push-button Hinge Bracket	107	B-32.264	Idler Slide Bushing
57A		Push-button Return Spring (2)	108		Flat Washer Steel
58	B-31.343	Locking Plate Spring	109	B-19.1431-1	Idler Throw-out Lever
59	B-19.870	Locking Plate for Push Button	110	B-32.291-1	Shouldered Washer
60	B-33.529-2	Midget Jack Closed Circuit	111	B-31.327	Idler Lift Compression Spring
		3/8" lg. Bushing (Ext. Speaker	112	B-35.1044	Sub-Idler Plate Assy.
		2)	113	B-32.275-1	#8-32 Hex Hd. Shoulder Screw
60A	B-33.528-2	Midget Jack Open Circuit 3/8"	114	B-28.163	Linen Washer
		lg. Bushing (Microphone)	115	B-33.405	Sub-Idler Wheel
61	B-19.876-1	Push-button Lever	116	73-2254-6	Felt Washer
62	48-2219-1	#6-32 x 5/16 Keps Hex Nut	117		"E" Ring 3/16" Shaft
63	B-19.858	Push-button Retaining Bracket	118	B-33.407-1	"C" Washer
64	57-1C-603-2	#6-32 x 3/16 Phillips B. H. M. S.	119	57-1C-603-2	#6-32 x 5/16" Phillip's B. H. M. S
65	73-2231-4	#6 Int. Lockwasher	120	73-2231-4	#6 Int. Lockwasher
66		Phillips Head Screw	121	B-19.961	Detent Spring
67		Washer	122	B-35.816-1	Speed Control Shaft Assy.
68		Washer	123	C-35.835-1	Brake Drum and Bushing Assy.
69	B-35.775-1	Interlock Lever and Handle	124	57-3589-1	#8-32 x 1/4 Bristol Hd. Set
		Assy.			Screw
70	B-31.338	Interlock Lever and Handle	125	B-19.976-1	Drive Mounting Plate Bracket
		Assy. Return Spring	126	73-2231-5	#8 Int. Lockwasher
71	B-35.774-1	Record Interlock Assy.	127	57-6C-805-1	#8-32 x 5/16" Phillip's R. H. M. S
72	73-2241-154	Lockwasher 5/16 O.D. x .144	128	B-31.324	Idler Tension Spring (2)
73	57-3445-1	#8-32 x 3/8 R. H. M. S.	129	57-6C-805-1	#6-32 x 5/16" Phillip's B. H. M. S
74	B-31.338	Brake Return Spring	130	B-28.194	Lord Shockmount (3)
75	48-2221	#10-32 Hex Nut (Elastic Stop	131	C-13.257-1	Flywheel
		Nut)	132	57-3589-1	#8-32 x 1/4" Bristol Hd. Set
76	73-2241-148F	Flat Washer 1/2 O.D. x .205			Screw
		I.D. x 1/32 Stl. C. P.	133	C-35.835-1	Brake Drum and Bushing Assy.
77	B-35.1046-1	Shift Plate Assy.	134	57-3589-1	#8-32 x 1/4" Bristol Hd. Set
78	B-35.835	Brake Slide Plate Assy.			Screw
79	B-31.339	Idler Lever Tension Spring	135	B-33.408	Idler Wheel, 2 1/2" Dia.
80	B-35.1070-1	Brake Spring Assy.	136	73-2231-5	#8 Int. Lockwasher
81		Brake Pad Felt	137	57-6C-805-1	#8-32 x 5/16" Phillip's R. H. M. S
82		Phillips Head Screw	138	B-19.862	Angle Bracket for Mounting
83		Hex Nut			Drive Assembly
84A	B-28.163	Linen Washer	139	57-6C-805-1	#8-32 x 5/16" Phillip's R. H. M. S
84	73.2248-39	Flat Washer .425 O.D. x .255	140	D-35.1054	Drive Mounting Plate Assy.
		x .070 Phenolic	141	B-33.411	Flat Washer 3/4 O.D. x 3/16
85	B-35.1051	Idler Lever Assy.			I.D. x .050 (3)
86	B-31.382	Spring Washer	142	48-2221	#10-32 Hex Nut (Elastic Stop
87	B-32.275	#8-32 Hex Hd. ShoulderScrew			Nut)
88	B-35.859-2	Switch Lever Assy.	143	D-36.153	Motor Round Type Fasco
89	57-3439-0	#6-32 x 3/16 Bristol Head Set		D-36.241	Motor Universal
		Screw	144	B-19.887-1	Fan Blade (Used With Fasco
90	B-31.333	Switch Arm Link			Motor)
91		Phono Jack (2)		C-19.1553	Fan Blade (Used With Universal
92	B-33.118	Spacer For Gear Train			Motor)
93	73-2231-4	#6 Int. Lockwasher	145	B-19.878-1	Speed Shift Lever
94	57-1C-603-2	#6-32 x 3/16 B. H. M. S. Phillips	146	B-28.181	Counter Belt
95	73-2231-4	#6 Int. Lockwasher			

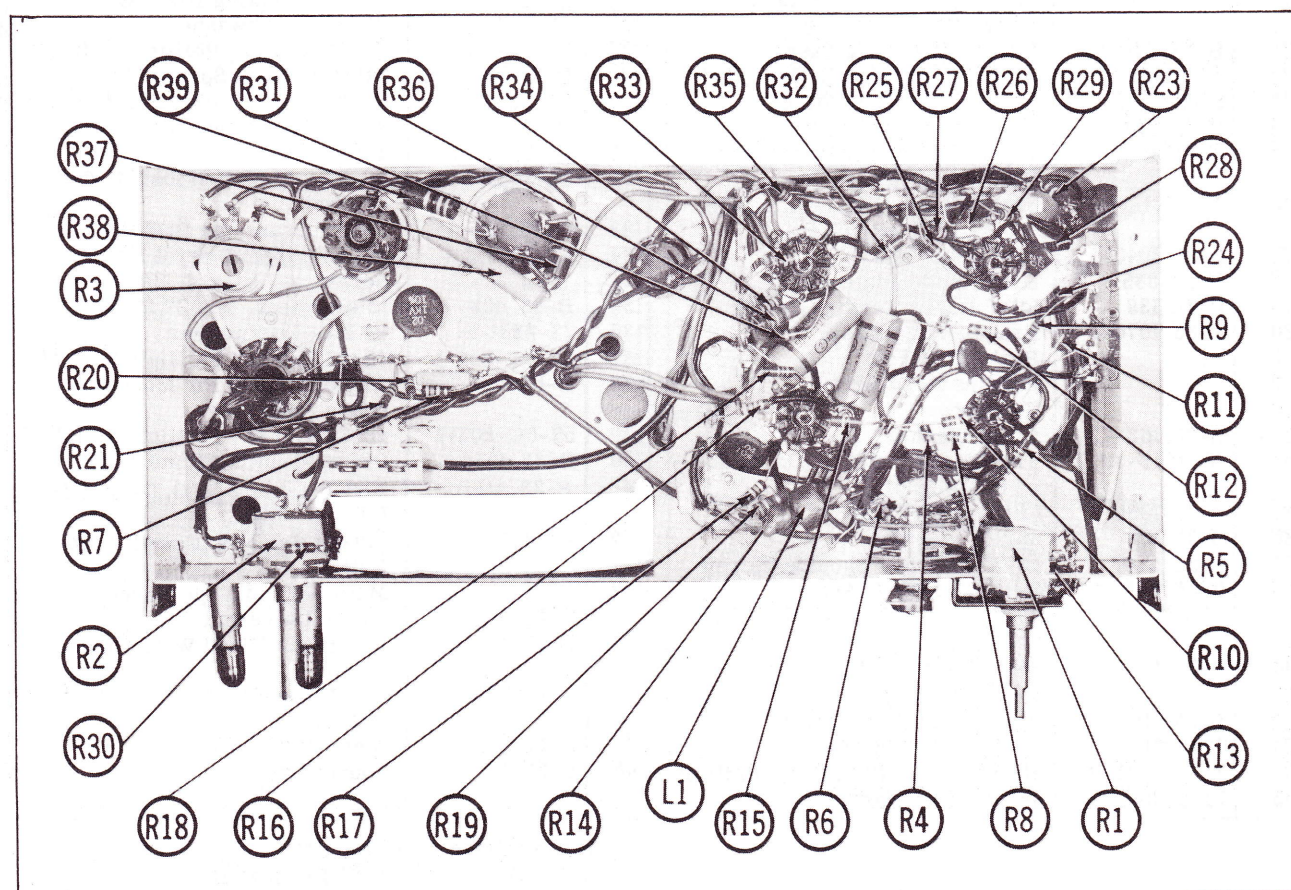
* Walsco Replacement Part No.
1430 Idler Drive Belt, 1457 Pinch Roller.

RECORDIO
MODEL R-592

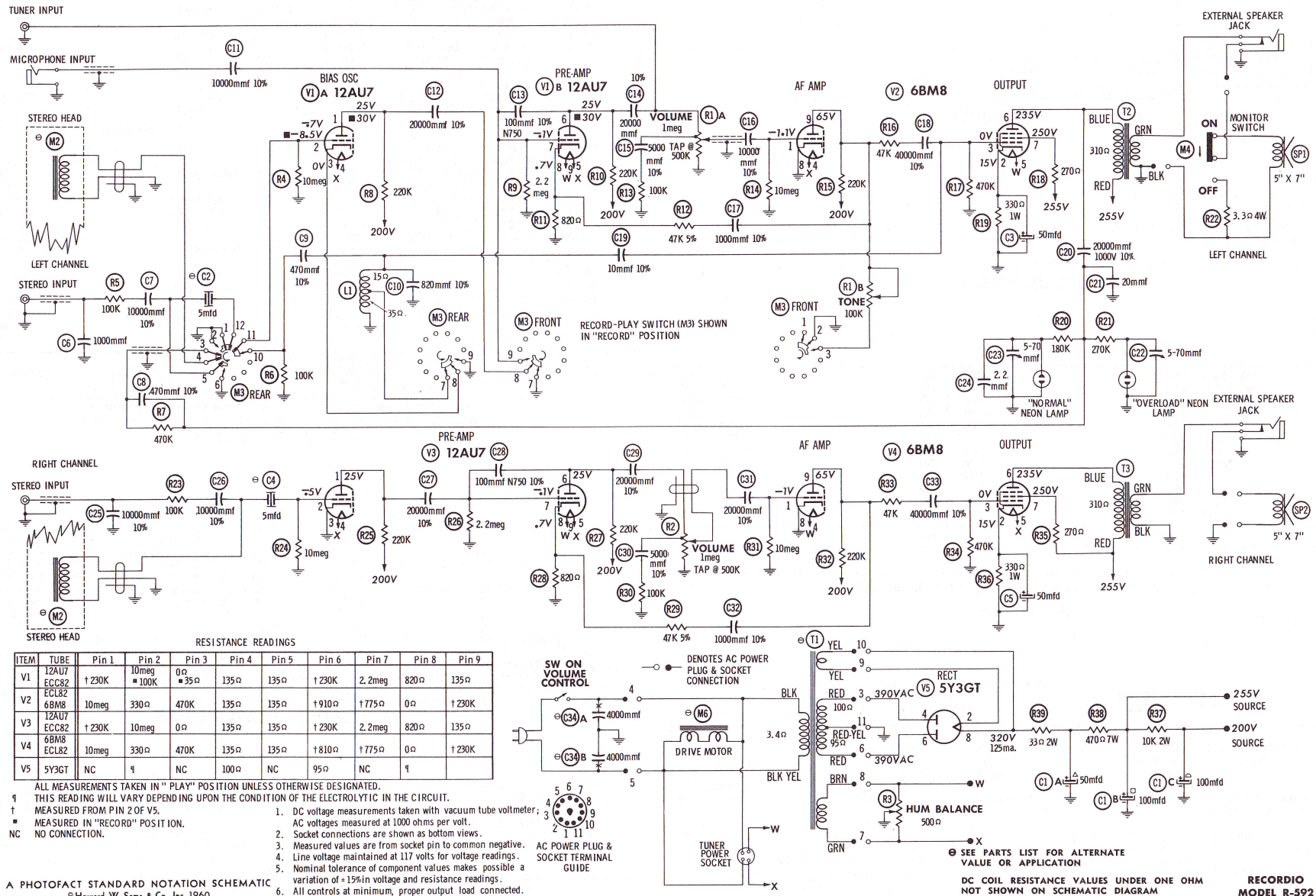
FOLDER 10



AMP CHASSIS - BOTTOM VIEW



AMP CHASSIS - BOTTOM VIEW



A PHOTOFAC STANDARD NOTATION SCHEMATIC
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AMP PARTS LIST AND DESCRIPTIONS

TUBES

CBS			GENERAL ELECTRIC			RAYTHEON			SYLVANIA		
ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE	ITEM No.	USE	TYPE
V1	Bias Oscillator- Left Channel Preamp.	12AU7/ECC82	V3	Right Channel Preamp.	12AU7/ECC82	V4	Right Channel AF Amp. - Right Channel Output Rectifier	6BM8/ECC82	V5		5Y3GT
V2	Left Channel AF Amp. - Left Channel Output	6BM8/ECC82									

ELECTROLYTIC CAPACITORS

ITEM No.	RATING		REPLACEMENT DATA						
	CAP.	VOLT.	RECORDIO PART No.	AEROVOX PART No.	CORNELL-DUBILIER PART No.	MALLORY PART No.	PYRAMID PART No.	SPRAGUE PART No.	NOTES
C1A	▲50	300	B-5, 421-11		BO332	FP227, 7		TVLS-4438, 1*	
B	■100	300				BR5035	TC79		
C	▲100	300							
C2	5	6 VNP	Note 1	NP-PRS7300	BBR10-50 †	TCN105			
C3	50	12, 5	B-5, 464	PRS1265	BBR50-25	TC29	TD-50-25	TVA-1206	
C4	5	6 VNP	Note 1	NP-PRS7300	BBR10-50 †	TCN105			
C5	50	12, 5	B-5, 464	PRS1265	BBR50-25	TC29	TD-50-25	TVA-1206	

Note 1. Some versions may use 2.2mfd@3V in this application (Part #B-5, 467, 1).

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

† Use 2 units. Connect negative terminals together. Connect positive terminals into circuit the same as the original non-polarized unit.

FIXED CAPACITORS

Capacity values given in the rating column are in mfd. for Paper Capacitors, and in mmfd. for Mica and Ceramic Capacitors.

ITEM No.	RATING	REMARKS	REPLACEMENT DATA					
			AEROVOX PART No.	CENTRALAB PART No.	CORNELL-DUBILIER PART No.	ELMENCOR PART No.	MALLORY PART No.	SPRAGUE PART No.
C6	1000	#B-4, 145	BPD-001	DD-102	BYA10D1	CCD-102	B-210	5HK-D10
C7	10000 10%		DI-10000		PM6S1	CCD-103	GEM-1611	10TS-S10
C8	470 10%		1469-00047	DD-471	5R5T47	CM-20B-471K	MCJ244	MS-347
C9	470 10%		1469-00047	DD-471	5R5T47	CM-20B-471K	MCJ244	MS-347
C10	820 10%		1469-00082	DD-821	IR5T82	CM-20B-821K	MCB251	MS-382
C11	10000 10%		DI-10000		PM6S1	CCD-103	GEM-1611	10TS-S10
C12	20000 10%				PM6S2	6DP-2-203	GEM-1612	10TS-S20
C13	100 N750 10%		N750-DI 100	DTN-100	C1071U	CCTN-101	CN7-310	10TCU-T10
C14	20000 10%				PM6S2	6DP-2-203	GEM-1612	10TS-S20
C15	5000 10%		DI-5000		PM6D5	CCD-502	JL-250	10TS-D50
C16	10000 10%		DI-10000		PM6S1	CCD-103	GEM-1611	10TS-S10
C17	1000 10%		1469-001	DD-102	IR5D1	CM-20B-102K	MCB255	MS-21
C18	40000 10%				PM6S4	6DP-3-403	GEM-1614	6TM-S4
C19	10 10%		1469-00001	DD-100	22R5Q1	CM-20B-100K	MCB215	MS-41
C20	20000 1000V 10%					16DP-4-203	GEM-1612	10TS-S20
C21	20		SI 20	DD-200	L10Q2	CCD-200	GP420	10TS-Q20
C22	5-70					462		
C23	5-70					462		
C24	2, 2		NPO-SI 2, 2	TCZ-2R2	C10V22C	CCTO-2R2	CNO-522	10TCC-V22
C25	10000 10%		DI-10000		PM6S1	CCD-103	GEM-1611	10TS-S10
C26	10000 10%		DI-10000		PM6S1	CCD-103	GEM-1611	10TS-S10
C27	20000 10%				PM6S2	6DP-2-203	GEM-1612	10TS-S20
C28	100 N750 10%		N750-DI 100	DTN-100	C1071U	CCTN-101	CN7-310	10TCU-T10
C29	20000 10%				PM6S2	6DP-2-203	GEM-1612	10TS-S20
C30	5000 10%		DI-5000		PM6D5	CCD-502	JL-250	10TS-D50
C31	20000 10%				PM6S2	6DP-2-203	GEM-1612	10TS-S20
C32	1000 10%		DI-1000	DI-102	IR5D1	CM-20B-102K	MCB255	MS-21
C33	40000 10%				PM6S4	6DP-3-403	GEM-1614	6TM-S4
C34A	4000		BPD-2X004	DD3-502	BCY6DD4	6DP-1-402	B2X250	5HK-2D40
B	4000					6DP-1-402		

Recordio Part Number.

① Not used in some versions.

CONTROLS

ITEM No.	RATING		REPLACEMENT DATA					INSTALLATION NOTES
	RESISTANCE	WATTS	RECORDIO PART No.	CENTRALAB PART No.	CLAROSTAT PART No.	CTS-IRC PART No.	MALLORY PART No.	
RIA	1meg	1/2	B11-288	F1-56		† QJ-1104R	UE3987	Volume, Left Channel
B	500K Tap	1/2	C-8, 227-2	R2-31				Tone, Left Channel
R2A	100K	1/2		BT-74	A47F5-1meg	Q17-137X	UT-443	Volume, Right Channel
B	500K Tap	1/2		Not Req.	FS-3	Not Req.	Not Req.	Power Off-On Hum Balance
B	1meg	1/2			SWE-12	76-1	US-26	
C	Shaft	1/2	B-8, 240	AB-4	B47-500-S	B11-103	PTA52L	
R3A	500Ω	1/2		AK-1	Not Req.	SK2	Not Req.	
B	Shaft	1/2						

† "Concentrik" equivalent: K-2 Kit with base elements & shafts: B19-137X, P1-106 (Panel).
Not available as a factory assembled unit. B11-128, R1-118 (Rear).

■ "STA-LOC" equivalent: FA16T55, RU15L, OF1125, IS1525.

RESISTORS

All wattages 1/2 watt, or less, unless otherwise listed.

ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS	ITEM No.	RATING	REMARKS
R4	10meg		R16	47K		R28	820Ω	
R5	100K		R17	470K		R29	47K 5%	
R6	100K		R18	270Ω		R30	100K	
R7	470K		R19	330Ω 1W		R31	10meg	
R8	220K		R20	180K		R32	220K	
R9	2, 2meg		R21	270K		R33	47K	
R10	220K		R22	3, 3Ω 4W		R34	470K	
R11	820Ω		R23	100K		R35	270Ω	
R12	47K 5%		R24	10meg		R36	330Ω 1W	
R13	100K		R25	220K		R37	10K 2W	
R14	10meg		R26	2, 2meg		R38	470Ω 7W	
R15	220K		R27	220K		R39	33Ω 2W	

COILS (RF-IF)

ITEM No.	USE	REPLACEMENT DATA						NOTES
		RECORDIO PART No.	Gramer PART No.	Meissner PART No.	Merit PART No.	Miller PART No.	Ram PART No.	
L1	Bias Osc.	B-1, 557						

TRANSFORMER (POWER)

ITEM No.	RATING			REPLACEMENT DATA					
	PRI.	SEC. 1	SEC. 2	RECORDIO PART No.	Halldorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	Thordarson PART No.
T1	117V @ .85A	580 VCT @ .125A	5V @ 2A	D-9, 262 ①					
	SEC. 3	SEC. 4	SEC. 5						
	6, 3V @ 1.8A								

① Part #C-35, 1271-1 includes plug.

AMP PARTS LIST AND DESCRIPTIONS (Continued) TRANSFORMER (AUDIO OUTPUT)

ITEM No.	IMPEDANCE	REPLACEMENT DATA					NOTES
		RECORDIO PART No.	Heildorson PART No.	Merit PART No.	Ram PART No.	Stancor PART No.	
T2	41002 3-4Ω	C-9-303	26S50	A-3018	AU-604	A-8092	
T3	41002 3-4Ω	C-9-303	26S50	A-3018	AU-604	A-8092	

SPEAKER

ITEM No.	TYPE	REPLACEMENT DATA		NOTES
		RECORDIO PART No.	QUAM PART No.	
SP1	5"x 7" PM	C-30.363-1	57A1	
SP2	5"x 7" PM	C-30.363-1	57A1	

MISCELLANEOUS

ITEM No.	PART NAME	RECORDIO PART No.	NOTES
M1	Erase Head	C-35.756-1	
M2	Erase Head	B-35.1048-1	
M3	Stereo Head	B-36.250	
M4	Function Switch	B-36.248	
M5	Switch	C-35.1266-1	Assembly, Includes Function Switch Part #B-11.282
M6	Motor	D-36.153	Monitor Switch (SPDT, Slide Type)
	Motor	D-36.241	Speed Control
	Microphone	B-36.195	Round Type
			Universal
			Crystal

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

NAME	PART NO.	DESCRIPTION
Knob	C-13.422-1	Off-On Volume (Black) .250" Shaft W/.156" Flat
Knob	C-13.416-1	Volume (Black) .202" Shaft W/.156" Flat
Knob	C-13.417-1	Tone (Black) .265" Shaft W/.234" Flat
Knob	B-32.302-2	Timer (Aluminum)
Knob	C-13.253-7	Speed Shift (Black)
Pushbutton	B-35.1043-1	Assembly (Black) 5 Used
Cabinet	B-2486-1	

WIRING DATA

General-use Unshielded Hook-up Wire Use BELDEN No. 8530 (Solid) Available in Ten Colors
 8524 (Stranded) Available in Ten Colors
 Power Cord Use BELDEN No. 1765-B (6 Ft. Length)
 1725-K (7½ Ft. Length)
 Low-Loss Shielded Lead (Interconnecting) Use BELDEN No. 8401
 Photo Pick-up Arm Cable Use BELDEN No. 8430 (Two Conductor - Twisted)

AMP CHASSIS—TOP VIEW

